



H.R. 3877 – To require the Director of the National Institute of Standards and Technology to establish an initiative to promote the research, development, and demonstration of miner tracking and communications systems and to promote the establishment of standards regarding underground communications to protect miners in the United States.

FLOOR SITUATION

H.R. 3877 is being considered on the floor under suspension of the rules and will require a two-thirds majority vote for passage. This legislation was introduced by Representative Jim Matheson (D-UT) on October 12, 2007. The bill was ordered to be reported, by voice vote, as amended, by the Committee on Science and Technology on October 24, 2007.

H.R. 3877 is expected to be considered on the floor of the House of Representatives on October 29, 2007.

SUMMARY

H.R. 3877 authorizes such sums as are necessary for fiscal years 2009 and 2010 for the Director of the National Institute of Standards and Technology (NIST) to work with other relevant federal agencies and private companies to:

- Establish a program to research, develop, establish best practices and methods to adapt existing technology as well as methods to “accelerate the development of next generation technology and tracking systems for mine communications;” and,
- Develop “consensus industry standards” and standard reference materials for communications in underground mines that include standards for (1) the appropriate use of frequency bands and power levels, (2) matters related to interoperability of systems, applications, and devices, (3) technology to prevent interference.

**Note: The authorized funds are to be derived from amounts authorized under section 3001 of the America COMPETES Act, H.R. 2272, which passed in the House of Representatives by a vote of 367 - 57 ([Roll no. 802](#)) on August 2, 2007, and was signed into law by the President on August 9, 2007. Click [here](#) for the Legislative Digest on H.R. 2272.*

BACKGROUND

The Congressional findings in H.R. 3877 report that “mines, particularly underground mines, have properties that present unique technical challenges for the integration of currently available tracking and communications systems. These properties include the lack of a clear path or open air which is required for radio signals and WiFi. Additionally, because coal is an absorptive material, less than 10 percent of the radio spectrum (only about 1 percent) that is used above ground can be used underground. A fraction of that radio spectrum is actually allocated for

commercial communications purposes. As a consequence, the availability of miner communication is severely limited.”

Currently In Progress at MSHA to Evaluate New Communications and Tracking Technology For Underground Mines: According to the Mine Safety and Health Administration (MSHA), “As of October 1, 2007, MSHA has observed testing or demonstration of 23 communications and/or tracking systems at various mine sites. We have met with representatives from 61 communications and tracking system companies. To date, we have had discussions with various vendors regarding 155 different proposals for development of mine communications and tracking systems. MSHA has shifted its focus from researching and testing new communications and tracking technology to focusing on the evaluation of approval applications for communications and tracking technology. We are currently investigating 46 approval applications for communications and tracking technology. We continue to work with the NIOSH Emergency Communication and Testing Partnership to arrange for demonstrations of additional systems.”

COST

The Congressional Budget Office (CBO) estimates that based on information from NIST, that implementing the provisions of H.R. 3877 would cost about \$1 million over the 2008-2012 period, subject to appropriation of the amounts authorized to be appropriated to NIST in the America COMPETES Act.

STAFF CONTACT

For questions or further information contact Matt Lakin at (202) 226-2302.